

REMARKS

Claims 1-15 and 23-32 are pending. Claims 16-22 have been canceled without disclaimer, pursuant to their withdrawal from consideration, and subject to Applicant's right to pursue the subject matter of these claims in a divisional application. Claims 1 and 23 are the remaining independent claims.

In the action mailed October 3, 2006, claim 12 was objected to as including a typographical informality. Claim 12 has been amended to address the Examiner's concerns.

CLAIM 1

Claim 1 was rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent Publication No. 2002/0043215 to Yoshioka (hereinafter "Yoshioka"). Claim 1 was also rejected under 35 U.S.C. § 103(a) as obvious over Yoshioka.

As a threshold matter, no basis for the alternative rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) was set forth in the Office action. Since 35 U.S.C. § 132 and 37 C.F.R. § 1.104(2) require that the reasons for any adverse action be stated in an Office action, the Office action is deficient. Applicant respectfully requests that the reasons for the alternative rejections of any claim, including claim 1, be set forth so that Applicant may judge the propriety of continuing prosecution.

As amended, claim 1 relates to a semiconductor processing system. The system includes a variable volume chamber to provide a gas consumed in a semiconductor process, a pressure detector to detect a parameter indicative of a pressure of the gas inside the variable volume chamber and to produce an output indicative thereof, and a pressure controller in communication with the pressure detector and the variable volume chamber, the pressure controller to apply a force to the variable volume chamber based on the output of the pressure detector and thereby regulate the pressure of the gas inside the variable volume chamber.

Yoshioka neither anticipates nor renders obvious such a semiconductor processing system. In this regard, Yoshioka describes a device that supplies liquid substances to a vaporizer 2. *See, e.g., Yoshioka, paras. [0009], [0078].* The liquid substances are supplied when a charge gas expels the liquid substance from substance containers 3. *See, e.g., Yoshioka, para. [0080]; FIG. 1.*

Yoshioka's FIG. 25 shows an example of a substance container 3. *See, e.g., Yoshioka, paras. [0052], [0137].* In this example, a bellows 311 is driven by the pressure of the charge gas to expel a liquid substance 4A. *See Yoshioka, para. [0138].* A gas pressure gauge 301 is connected to a conduit 300 on the charge gas line to measure the pressure of the charge gas. *See Yoshioka, para. [0134].*

Yoshioka thus neither describes nor suggests elements and/or limitations recited in claim 1. For example, Yoshioka neither describes nor suggests a pressure detector to detect a parameter indicative of a pressure of a gas consumed in a semiconductor process inside a variable volume chamber. As discussed above, Yoshioka's device supplies liquid substances and measures the pressure of a charge gas. Such a charge gas is not consumed in a semiconductor process.

Accordingly, claim 1 is neither anticipated nor rendered obvious by Yoshioka. Applicant thus respectfully requests that the rejections of claim 1, and the claims dependent therefrom, be withdrawn.

Claim 1 was rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,419,462 to Horie et al. (hereinafter "Horie"). Claim 1 was also rejected under 35 U.S.C. § 103(a) as obvious over Horie.

Once again, no basis for the alternative rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) was set forth in the Office action. Applicant respectfully requests that the basis for all rejections be set forth.

Moreover, Horie neither anticipates nor renders obvious the semiconductor processing system recited in claim 1. In this regard, Horie describes positive displacement liquid delivery system. See, e.g., Horie, col. 1, line 9-10. Horie's system includes a housing 122 that receives liquid through an inlet

pipe 118 from a feed liquid tank 112 and output liquid through an outlet pipe 120. *See, e.g., Horie, FIG. 4; col. 10, line 5-15.*

Housing 122 can include a bellows 124. *Id.* As shown in FIGS. 8 and 9, bellows 124 can be driven by gas received through an intake tube 166 from a pressure control unit 172. *See Horie, col. 12, line 49-55, 63-65.* Pressure control unit 172 can measure and control pressure in the intake tube 166. *Id.* This can be done to maintain a constant pressure on the liquid in the working space of housing 122. *See Horie, col. 12, line 57-62.*

Horie thus neither describes nor suggests elements and/or limitations recited in claim 1. For example, Horie neither describes nor suggests a pressure detector to detect a parameter indicative of a pressure of a gas consumed in a semiconductor process inside a variable volume chamber. As discussed above, Horie's device supplies liquid substances and measures the pressure of a charge gas. Such a charge gas is not consumed in a semiconductor process.

Accordingly, claim 1 is neither anticipated nor rendered obvious by Horie. Applicant thus respectfully requests that the rejections of claim 1, and the claims dependent therefrom, be withdrawn.

CLAIM 23

Claim 23 was rejected under 35 U.S.C. § 102(b) as anticipated by Yoshioka. Claim 23 was also rejected under 35 U.S.C. § 103(a) as obvious over Yoshioka.

Once again, no basis for the alternative rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) was set forth in the Office action. Applicant respectfully requests that the basis for all rejections be set forth.

As amended, claim 23 relates to a chemical reactant delivery system. The system comprises a variable volume chamber having an outlet, a pressure detector to detect a parameter indicative of a pressure of the reactant gas inside the variable volume chamber and to produce an output indicative thereof, and a pressure controller in communication with the pressure detector and the variable volume chamber. The outlet is to deliver a reactant gas from an interior region of the variable volume chamber to a reaction chamber. The pressure controller is to apply a force to the variable volume chamber based on the output of the pressure detector and thereby regulate the pressure of the reactant gas inside the variable volume chamber.

Yoshioka neither anticipates nor renders obvious such a chemical reactant delivery system. As discussed above, Yoshioka supplies liquid substances from a container 3 that includes a bellows driven by a charge gas. A gas pressure gauge can measure the pressure of the charge gas on the charge gas line.

Yoshioka thus neither describes nor suggests elements and/or limitations recited in claim 23. For example, Yoshioka neither describes nor suggests a pressure detector to detect a parameter indicative of a pressure of a reactant gas inside a variable volume chamber. As discussed above, Yoshioka's device supplies liquid substances and measures the pressure of a charge gas. Such a charge gas is not a reactant gas.

Accordingly, claim 23 is neither anticipated nor rendered obvious by Yoshioka. Applicant thus respectfully requests that the rejections of claim 23, and the claims dependent therefrom, be withdrawn.

Claim 23 was rejected under 35 U.S.C. § 102(b) as anticipated by Horie. Claim 23 was also rejected under 35 U.S.C. § 103(a) as obvious over Horie.

Once again, no basis for the alternative rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) was set forth in the Office action. Applicant respectfully requests that the basis for all rejections be set forth.

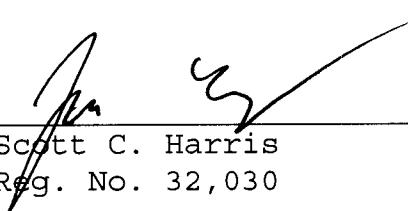
Moreover, Horie neither anticipates nor renders obvious the chemical reactant delivery system recited in claim 23. In this regard, Horie's positive displacement liquid delivery system can include a gas-driven bellows. The gas can be received from a pressure control unit 172 that measures and controls the pressure of the driving gas.

Horie thus neither describes nor suggests elements and/or limitations recited in claim 23. For example, Horie neither describes nor suggests a pressure detector to detect a parameter indicative of a pressure of a reactant gas inside a variable volume chamber. As discussed above, Horie's device supplies liquid substances and measures the pressure of a charge gas. Such a charge gas is not a reactant gas.

Accordingly, claim 23 is neither anticipated nor rendered obvious by Horie. Applicant thus respectfully requests that the rejections of claim 23, and the claims dependent therefrom, be withdrawn.

Applicant asks that all claims be allowed. No fees are believed due at this time. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,



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